Western Electric Co., Incorporated,
Engineering Dept.,
New York.

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METHOD OF OPERATION
RINGING CIRCUIT

For Secondary Testing Cord Circuit - Local Test Desk - Full Mechanical Power Driven System.

GENERAL DESCRIPTION

1. These circuits are used in a local test desk at a mechanical office, in connection with primary and secondary testing cords to provide means for semi-selective ringing of the stations on a two or four party line.

DETAILED DESCRIPTION

OPERATION

FIGURE #1. TWO OR FOUR PARTY SEMI-SELECTIVE RINGING

2. When the subscriber's line under test is selected by means of a sender, the PMG or SMG relay in the testing cord circuit operates, furnishing ground to the lead C. When the R or M key is operated, the R relay operates over a circuit from battery through its winding, break contacts of the T-1 and T-2 relays, break contact of the RR relay, make contact of the R or M key to ground on lead C. The R relay operated, furnishes battery to the 1200 ohm winding of the PU relay which operates under control of the pick-up interrupter and locks through its make contact, connecting "2 RING" machine ringing current to the ring or tip of the line according to the key operated. The PU relay is used in the circuit to apply ringing current at the start of the "2 RING" code thereby preventing a false code. When the receiver is removed from the switchhook at the called station, the T-2 relay operates removing the short circuit from the winding of the RR relay which operates in series with the R relay. The RR relay operated functions as follows:- (a) Disconnects ringing current from the tip and ring leads T-1 and R-1. (b) Lights the TR lamp. (c) Opens a contact to prevent its being short circuited upon the release of the T-2 relay. (d) Connects ground to the tip side of the subscriber's line and the supervisory relay on the ringside of the secondary testing cord circuit to the ring of the subscriber's line for supervisory purposes. When the test man restores the ringing key, the R and RR relays release, restoring the circuit to normal.

3. When the W or J party key is operated, the circuit functions as above described with the exception that the "1 RING" test machine ringing current is applied by the key to the ring or tip of the line through the T-1 relay directly and independently of the PU relay.

FIGURE #2. TWO PARTY SELECTIVE RINGING

4. The operation of the AICT key to call either of the two stations performs the same functions as above described for the operation of the "W" or "J" keys. The only exception is that the R relay of Figure #1 is here replaced by a #18-G resistance.

CIRCUIT REQUIREMENTS

	OPERATE	NON-OPERATE	RELEASE
114-AK (T) (T-1) and (T-2)	With ringing machine at approximately 1200 R.P.M. Test .033 amp. Readj. .032 amp. With ringing machine at approximately 1000 R.P.M. Test .037 amp. Readj. .036 amp.	With ringing machine at approximately 1200 R.P.M. Test .029 amp. Readj. .030 amp. With ringing machine at approximately 1000 R.P.M. Test .033 amp. Readj. .034 amp.	
E75	Test .035 amp. Readj. .011 amp.		Test .0026 amp. Readj. .0028 amp.
E212 (RR)	Test .045 amp. Readj. .040 amp.	Test .028 amp. Readj. .030 amp.	
Spl. E per D-12829 Inner Wdg.	Test .011 amp. Readj. .010 amp.		Test .0023 amp. Readj. .0025 amp.

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CIRCUIT REQUIREMENTS

OPERATE NON-OPERATE RELEASE

114-AK (T) (T-1) and (T-2) With ringing machine at approximately 1200 R.P.M. Test .033 amp. Readj. .032 amp. With ringing machine at approximately 1000 R.P.M. Test .037 amp. Readj. .036 amp. | With ringing machine at approximately 1200 R.P.M. Test .029 amp. Readj. .030 amp. With ringing machine at approximately 1000 R.P.M. Test .033 amp. Readj. .034 amp.

E75 Test .035 amp. Readj. .011 amp. | Test .0026 amp. Readj. .0028 amp.

E212 (RR) Test .045 amp. Readj. .040 amp. | Test .028 amp. Readj. .030 amp.

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